
FRBSF WEEKLY LETTER

February 16, 1990

The Western Economy in the 80s

The western region of the United States outperformed the rest of the nation by a wide margin in the 1980s. In the nine western states that make up the Twelfth Federal Reserve District, employment grew 26 percent during the decade, while employment grew 19 percent in the rest of the country. Moreover, the decade saw many important shifts among the various states and sectors in the West. This *Letter* examines some of the decade's most important changes.

State performance varied

The performance of individual states varied sharply over the decade. Arizona and Nevada posted employment gains of greater than 40 percent. California, Hawaii, Alaska, and Utah also posted employment gains higher than the U.S. average, ranging from 22 to 29 percent. In contrast, employment in Oregon, Washington, and Idaho grew more slowly than it did in the nation, with gains of 13 to 16 percent.

All nine western states experienced uneven spurts of growth during the 1980s. Alaska's economy grew strongly early in the decade, but collapsed when oil prices fell sharply in 1986. Arizona posted exceptional annual employment growth rates of nearly 10 percent during the mid-1980s before slumping at the end of the decade. Since mid-decade, California and Hawaii have seen relatively stable growth, after earlier sluggishness. Employment in Idaho and Utah fluctuated throughout the decade, while Nevada registered the fastest growth in the nation during the late 1980s. Oregon and Washington both saw strong growth late in the decade, after lagging early in the 80s.

Resource industries

Many of the changes in states' growth rates during the decade were associated with the volatility of resource markets. For example, sharply rising

oil prices at the beginning of the decade stimulated drilling off the California coast and pulled Alaska into a boom that saw robust 23 percent employment growth between 1980 and 1985. The collapse of oil prices in 1986 brought a sharp recession to Alaska, with employment falling nine percent between 1985 and 1987.

Fluctuations in mineral prices during the 1980s contributed to economic volatility in the mountain states. District copper production soared in 1981 to 1.2 million tons, but then dropped 37 percent by 1984. Copper production has since recovered somewhat, but remains 26 percent below its 1981 peak. Mining employment overall has recovered somewhat more, but remains 22 percent below its peak level.

Agriculture provided another source of economic volatility in the West. Following the national pattern, cash receipts slumped in mid-decade before recovering during subsequent years. The West outperformed the rest of the nation, though, because higher-valued specialty products boosted the region's agricultural income. Farm cash receipts in the West rose 27 percent between 1979 and 1989, compared to only 11 percent nationally, thereby boosting the District's share of national cash receipts from 16 to 18 percent.

Volatility in forest products industries also contributed to regional economic fluctuations. High interest rates and slumping construction at the beginning of the decade caused lumber production to fall 32 percent between 1979 and 1982, contributing to the sharp drop in the economies of the Pacific Northwest. The subsequent national recovery boosted the industry, although District lumber production did not exceed its 1979 level until 1986.

THE WESTERN ECONOMY

The Western Economy is a quarterly review of economic conditions in the Twelfth Federal Reserve District. It is published in the *Weekly Letter* on the third Friday of February, May, August and November.

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Manufacturing growth

Manufacturing employment rose during the decade in the West, although it fell nationally. Moreover, the 1980s marked shifts in the relative importance of several key manufacturing industries. For the most part, high-technology industries gained prominence, while basic industries suffered declines. Primary metals, in particular, witnessed a 15 percent decline in employment during the decade.

Innovations that made electronic components more powerful and less costly led to a healthy 17 percent increase in western electronic industry employment over the decade. Early growth was centered in California, with employment rising 19 percent between 1980 and 1984. As the industry matured, processing operations increasingly were spun off to lower cost areas. Between 1985 and 1989, electronics employment rose 19 percent in Oregon and 85 percent in Idaho.

Increased defense spending and growing orders for commercial aircraft combined to boost employment in the District's aerospace industry by about 29 percent between 1980 and 1989. Because the West currently receives 45 percent of Department of Defense prime contract awards for missiles and space systems, the 22 percent increase in the real value of these defense contracts between 1982 and 1988 was a significant boost to the region. At the same time, increased air traffic led to rapid growth in commercial aircraft manufacturing. The West gained significantly from this growth, since several large aerospace firms and numerous suppliers are located in the region.

Service industries dominate

Nearly 90 percent of all new jobs in the District were in the service industries. The most dramatic gains were in trade, and in business, health, legal, and recreation services. Trade employment grew 30 percent during the decade because the West's growing population and per capita income boosted retail sales. Moreover, rising foreign trade stimulated wholesale trade and transportation activity. The real dollar value of imports and exports passing through western ports rose 45 percent during the decade.

Rapid growth in business, health, legal, and recreation services reflects several important

trends. First, employment in business services rose an astounding 84 percent during the 1980s, as firms contracted out for tasks that used to be performed in-house. Second, an aging population and increased medical capabilities boosted employment in health services 40 percent during the decade. And third, rising per capita income spurred demand for recreation, leading to a robust 47 percent increase in employment in hotel and recreation services in the District.

With respect to the other service sectors, finance, insurance, and real estate employment grew strongly, rising 30 percent over the decade. The weakest components of the service-producing industries were the transportation and government sectors, which registered employment gains of 12 and 14 percent, respectively.

Building activity

Construction activity was a relatively good barometer of broader economic conditions in the western region. Building activity grew disproportionately more in growing economies and fell off substantially in slowing or stagnating economies.

Sharp fluctuations in construction activity were apparent in construction's share of total employment during the 1980s. In Alaska, construction accounted for as much as 10 percent of all jobs during the mid-80s. However, when construction activity fell with collapsing oil prices, construction's share of total employment fell to four percent. In Nevada, construction employment surged, accounting for six to 7½ percent of total employment during the past three years. In Arizona, the share peaked at almost nine percent in 1985, before levelling off at a still-high six percent, despite the state's highly publicized real estate problems. In the six other Twelfth District states, construction employment shares were more stable, fluctuating between three and 5½ percent during the decade.

Continued strength

The 1980s saw the western economy grow more rapidly than the nation's. A rapidly growing population and an abundance of growing industries, such as services, commercial aerospace, and biotechnology, suggest that the West may continue to outperform the national economy in the 1990s.

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DISTRICT INDICATORS (Seasonally Adjusted)

	89Q4	89Q3	89Q2	89Q1	88Q4	88Q3	88Q2	88Q1	X CHANGE 89Q3	FROM: 88Q4
AGRICULTURE										
U.S. CROP PRICES, 1985=100	112.9	112.0	115.1	116.7	112.2	111.6	102.3	102.2	0.84	0.62
DISTRICT CROP PRICES, 1985=100	114.4	114.1	120.5	120.9	112.1	110.8	92.4	97.1	0.23	2.01
FARM CASH RECEIPTS, MILLION \$	N/A	2375.7	2434.7	2460.8	2330.9	2308.9	2218.3	2363.4	N/A	N/A
CATTLE ON FEED, 1985=100	91.8	92.9	90.2	93.1	96.5	95.9	96.7	94.0	-1.19	-4.82
CATTLE PRICES, CALIFORNIA, \$/CWT.	62.2	63.0	61.8	61.7	60.1	61.4	63.4	61.6	-1.19	3.63
FORESTRY										
LUMBER PRODUCTION, MILLIONS BOARD FEET	1806.3	1801.8	1651.1	1556.4	1803.3	1583.0	1641.0	1724.9	0.25	0.17
NORTHWEST LUMBER INVENTORY, MIL. BOARD FEET	2506.8	2539.2	2448.8	2422.7	2568.2	2459.2	2505.5	2523.2	-1.28	-2.39
U.S. LUMBER PRICES, 1986=100	128.1	123.8	119.5	123.4	122.4	120.0	124.3	122.7	3.47	4.60
ENERGY										
SPOT PRICE OF OIL, \$/BARREL	20.3	19.3	20.5	18.5	14.8	15.2	17.3	16.7	5.47	37.34
U.S. RIG COUNT	1017.6	904.7	807.1	753.4	912.3	941.5	942.8	950.7	12.48	11.54
DISTRICT RIG COUNT	70.3	75.6	66.7	62.0	72.8	92.7	89.9	75.9	-6.99	-3.41
FUEL MINING EMPLOYMENT, 1985=100	79.3	81.4	79.5	78.1	79.3	82.4	83.1	81.8	-2.63	-0.05
U.S. SEISMIC CREW COUNT	125.7	133.3	130.5	136.1	151.4	183.3	198.2	198.9	-5.75	-16.97
MINING										
MINERAL PRICES, 1986=100	125.5	131.8	134.3	147.4	147.7	138.2	136.3	134.1	-4.81	-15.05
METAL MINING EMPLOYMENT, 1985=100	184.8	179.9	176.2	173.7	166.6	161.4	154.2	146.1	2.75	10.93
CONSTRUCTION										
NONRESIDENTIAL AWARDS	1427.4	1677.2	1533.3	1432.5	1334.0	1571.0	1345.2	1489.1	-14.89	7.01
RESIDENTIAL PERMITS	33475	30509	31304	31065	35414	32858	31526	28447	9.72	-5.48
WESTERN HOUSING STARTS, THOUSANDS	28.7	35.2	37.7	29.6	33.0	36.3	36.8	28.5	-18.54	-12.94
CONSTRUCTION EMPLOYMENT, THOUSANDS	1019.3	1003.4	991.5	985.6	967.2	949.0	935.3	920.2	1.58	5.38
MANUFACTURING										
WAGES, CALIFORNIA, \$/HOUR	11.3	11.2	11.1	11.0	11.0	10.9	10.8	10.8	0.46	2.93
EMPLOYMENT, THOUSANDS	3163.8	3158.7	3156.2	3156.0	3136.6	3108.6	3103.9	3090.7	0.16	0.87
DURABLES, 1985=100	104.5	104.5	104.2	104.3	103.5	102.7	102.5	102.2	0.00	0.91
CONSTRUCTION DURABLES, 1985=100	114.8	114.4	112.6	114.0	112.6	110.1	111.3	111.2	0.35	1.92
AEROSPACE, 1985=100	119.6	118.9	118.2	116.8	115.3	114.2	113.6	113.6	0.60	3.73
ELECTRONICS, 1985=100	99.9	99.6	99.4	99.9	100.3	99.1	97.9	96.9	0.35	-0.31
SEMICONDUCTOR ORDERS, MILLIONS \$, NOT S.A.	1195.5	1166.3	1300.0	1300.0	1066.0	1222.0	1269.0	1126.2	2.50	12.15
WHLS/RETAIL TRADE EMPLOYMENT, THOUSANDS										
RETAIL SALES, PACIFIC DISTRICT, MIL. \$	4722.2	4679.9	4643.2	4627.4	4559.0	4529.5	4483.8	4447.9	0.90	3.58
	23533	23420	23074	22478	22044	21038	20779	20783	0.48	6.75
SERVICES EMPLOYMENT, THOUSANDS										
HEALTH CARE, 1985=100	5054.3	4990.8	4942.3	4909.6	4864.6	4805.2	4754.5	4695.4	1.27	3.90
BUSINESS SERVICES, 1985=100	119.6	118.4	117.1	116.3	115.4	114.2	113.3	112.3	1.02	3.68
HOTEL, 1985=100	132.1	130.5	128.6	128.5	127.0	126.3	124.9	122.2	1.26	4.00
RECREATION, 1985=100	129.6	127.9	126.3	125.4	125.0	122.2	120.4	119.7	1.29	3.67
	112.1	110.9	111.4	110.8	108.2	105.1	105.7	106.4	1.11	3.63
FINANCE, INSUR. AND REAL ESTATE EMPLOYMENT										
	1247.5	1237.0	1228.5	1226.7	1219.9	1214.0	1209.2	1205.3	0.85	2.26
GOVERNMENT EMPLOYMENT, THOUSANDS										
FEDERAL GOVERNMENT	629.2	624.0	625.8	627.2	620.8	615.6	613.0	613.0	0.83	1.35
STATE AND LOCAL	2728.2	2705.6	2665.3	2644.9	2624.0	2598.9	2577.6	2553.3	0.83	3.97

Data are weighted aggregates of available 12th District state data and are expressed as monthly rates unless otherwise noted.
District Indicator data are constructed by FRBSF research staff from public and industry sources.

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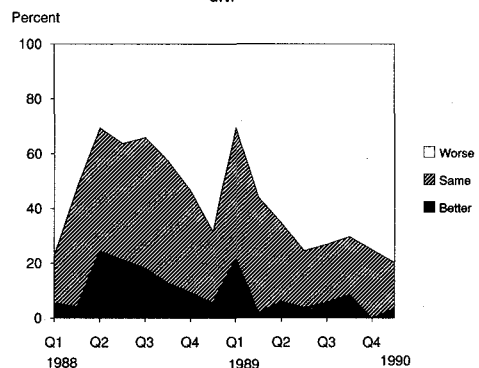
PERSONAL INCOME ANNUALIZED PERCENT GROWTH RATES

	89Q3	89Q2	89Q1	88Q4	88Q3
ALASKA	13.6	33.1	10.6	5.8	1.9
ARIZONA	10.3	8.4	5.7	9.4	10.0
CALIFORNIA	10.9	9.8	1.9	12.2	12.3
HAWAII	10.8	14.9	3.3	15.8	10.8
IDAHO	5.9	9.7	6.4	14.5	7.9
NEVADA	13.7	14.4	8.8	16.2	15.2
OREGON	7.6	12.8	4.1	14.0	7.6
UTAH	12.7	15.2	0.9	14.1	7.3
WASHINGTON	10.6	10.5	12.2	11.0	6.5
12TH DISTRICT	10.7	10.6	3.6	12.2	11.0
U.S.	7.6	9.0	6.5	11.1	8.2

* Year-to-date

ANNUAL GROWTH		
1989*	1988	1987
18.7	4.3	-0.2
8.1	7.0	9.8
7.5	9.5	8.8
9.6	10.3	8.7
7.3	10.6	4.1
12.3	13.8	11.2
8.1	10.0	7.4
9.4	7.9	6.9
11.1	7.9	6.5
8.2	9.2	8.4
7.7	7.8	8.5

Twelfth District Business Sentiment Index* GNP



* The index is constructed from a survey of approximately 75 business leaders in the 12th Federal Reserve District.

NON-AGRICULTURAL EMPLOYMENT ANNUALIZED PERCENT GROWTH RATES

	89Q4	89Q3	89Q2	89Q1	88Q4
ALASKA	-2.3	5.6	7.5	3.0	3.7
ARIZONA	5.6	2.2	1.4	2.7	1.4
CALIFORNIA	2.6	2.7	1.0	4.0	3.0
HAWAII	3.8	3.2	2.5	3.9	3.0
IDAHO	8.4	4.9	2.4	3.3	4.9
NEVADA	8.2	5.3	3.3	6.5	9.5
OREGON	3.9	2.5	1.8	4.1	5.6
UTAH	5.8	4.9	5.5	1.7	5.3
WASHINGTON	7.3	2.8	4.1	6.3	6.7
12TH DISTRICT	3.7	2.9	1.8	4.1	3.7
U.S.	1.7	2.1	2.4	3.3	3.1

ANNUAL GROWTH		
1989	1988	1987
3.5	1.9	-2.2
3.0	0.3	3.9
2.6	3.2	3.8
3.4	3.0	5.1
4.8	5.1	1.2
5.9	7.9	7.3
3.1	4.6	4.8
4.5	4.2	1.5
5.2	4.3	5.6
3.2	3.4	4.0
2.4	3.2	3.1

UNEMPLOYMENT RATES AVERAGE QUARTERLY DATA

	89Q4	89Q3	89Q2	89Q1	88Q4
ALASKA	7.6	7.6	7.4	8.5	9.1
ARIZONA	4.7	5.8	5.1	5.9	6.2
CALIFORNIA	5.0	5.0	5.5	4.8	5.0
HAWAII	2.7	2.0	3.2	3.6	3.2
IDAHO	5.0	5.0	5.1	5.6	5.4
NEVADA	4.9	5.3	5.1	5.5	4.4
OREGON	5.2	5.3	5.4	5.5	5.1
UTAH	3.8	4.1	4.5	4.3	4.1
WASHINGTON	5.8	5.9	5.8	6.0	5.7
12TH DISTRICT	5.0	5.1	5.4	5.1	5.1
U.S.	5.3	5.3	5.3	5.2	5.3

ANNUAL AVERAGE		
1989	1988	1987
7.8	9.1	10.8
5.4	6.3	6.3
5.1	5.3	5.7
2.9	3.1	3.9
5.2	6.1	8.0
5.2	5.1	6.3
5.3	5.8	6.2
4.2	4.9	6.3
5.8	6.1	7.6
5.2	5.5	6.1
5.3	5.5	6.2